REPORT OF THE UTILITIES DEPARTMENT

of

THE PUBLIC SERVICE COMMISSION OF SOUTH CAROLINA

DOCKET NO. 96-005-E

DUKE POWER COMPANY

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INDEX OF FUEL REPORT

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DUKE POWER COMPANY

REPORT OF FUEL ADJUSTMENT ANALYSIS

Scope of Examination

The Commission's Utilities Department Staff analyzed the Company's procedures and practices pertaining to its fuel related operations. Staff's examination consisted of the following:

1) Review of the Company's monthly fuel reports including:
   a) Power Plant Performance Data Reports
   b) Major Unit Outage Reports
   c) Generation Mix
   d) Generation Statistics
   e) Retail Comparison of MWH Sales
   f) Retail Comparison of Fuel Costs
2) On-site inspection of the Company's coal quality sampling technique.
3) Review of the Company's methodology used to estimate fuel costs.
4) Review of the Company's currently approved Adjustment for Fuel Costs Tariff.
5) History of Cumulative Recovery Account
6) Calculation of fuel costs to be included in the base rates June through November 1996.

REVIEW OF COMPANY'S MONTHLY FUEL REPORTS

Duke Power Company (the Company) files with this Commission monthly reports detailing power plant performance, major unit outages, generation mix and other reports which provide the Staff pertinent data on which to evaluate the Company's fuel purchases and usage.

The Power Plant Performance Data Report Summary for fossil and nuclear plants is shown on **Exhibit No. 1.** It includes a listing of the individual units with their capacity factors and equivalent availability factors for each month in the period. These factors are expressed as percentages. These percentages are a useful index which can highlight or identify problems or unusual occurrences.

The Company's Nuclear Unit Outage Report, **Exhibit No. 2A** considers each outage experienced by a unit, giving the inclusive dates of the outage, hours down, type outage (scheduled or forced), the reason for the outage and corrective action taken. This information covers the period being considered in this proceeding. Staff compiled this data through a review of Company documents, NRC filings and interviews with Company personnel.

The Company's Base Load Fossil Unit Outage Report, **Exhibit No. 2B** shows each outage of the base load fossil fired plants of 100 hours or more giving the month of the outage, hours down, type outage, the reason for the outage and corrective action taken. This information covers the period being considered in this proceeding.

Staff reviewed and compiled a percentage Generation Mix statistic sheet for the Company's fossil, nuclear and hydraulic plants for October 1995 through March 1996. The

ON-SITE INSPECTION OF COMPANY'S COAL QUALITY SAMPLING TECHNIQUES

The Company's fuel sampling procedure for coal consists of identification of each train car by specific shipper, point of origin and producer. A sample is taken from each car while unloading and is then crushed and placed in a sealed container. The sample is then sent to the laboratory and analyzed for moisture, ash, BTU and sulfur content. The results of this testing are used to determine the actual price the Company will pay for the coal it received. The price could vary from the contracted price depending upon whether the quality of the coal, such as BTU content, is higher or lower than the level stipulated in the agreement. This cost does not include any non-fuel cost or coal handling cost at the generating plant. Staff has observed this procedure for fuel sampling and has found this procedure to be adequate at this time.

REVIEW OF THE COMPANY'S METHODOLOGY USED TO ESTIMATE FUEL COSTS

Staff reviewed the Company's methodology used to estimate fuel costs for this period. Total generation is developed by System Planning, and system sales and South Carolina retail sales are obtained from the Company's Forecasting Department. First the nuclear generation for each unit is estimated for each month in the six month period after considering any scheduled outages. Secondly hydro generation is estimated based on median hydro. Next a small amount of generation is estimated from combustion turbines and also a

small amount of purchased power is included. The balance of the generation comes from the Company's coal stations.

The generation is then priced, generally using current fuel costs. If a nuclear unit is being refueled, costs expected after the refueling are used for that unit.

REVIEW OF THE COMPANY'S CURRENTLY APPROVED RETAIL ADJUSTMENT FOR FUEL COSTS TARIFF

The Staff has reviewed the Company's currently approved Retail Adjustment for Fuel Costs Tariff, **Exhibit No. 8**, and determined that it has performed as intended and continues to be an adequate methodology for calculating the appropriate fuel costs.

HISTORY OF THE CUMULATIVE RECOVERY ACCOUNT

Exhibit No. 9 is a history of the cumulative recovery account.

CALCULATION OF BASE RATE FUEL COST COMPONENT FOR JUNE 1996 THROUGH NOVEMBER 1996.

Utilizing the currently projected sales and fuel cost figures for the period June 1996 through November 1996 and including the projected under-recovered balance in the cumulative recovery account as of May 1996 of $1,161,327 (See Accounting Exhibit G) the average fuel expense is estimated to be 1.0445 ¢/KWH. The Commission has consistently expressed its expectation that the Company would exercise all reasonable prudence and efficiency in its fuel purchasing practices and aggressively control the operation and maintenance of their production facilities to assure the most reasonable fuel costs

possible. The Commission has directed the Staff to monitor the Company's plant operations and fuel purchasing to ensure that any inefficiency or negligent practice is brought to their attention. **Exhibit No. 10** is a table of Projections of the Cumulative Recovery Account for various fuel base levels for the six month period ending November 1996. Also indicated in the table are the projected results using the current fuel base component and the Company's proposed factor of 1.0000 ¢/KWH.

DUKE POWER COMPANY

POWER PLANT PERFORMANCE DATA (%) REPORT

UNIT CAPACITY FACTOR	MW RATING	LIFE TIME	YEAR 1992	YEAR 1993	YEAR 1994	YEAR 1995	OCT 1995	NOV 1995	DEC 1995	JAN 1996	FEB 1996	MAR 1996
CATAWBA 1	1129	74	71	77	99	88	102	103	102	84	90	102
CATAWBA 2	1129	74	94	83	78	80	18	0	97	103	59	103
MCGUIRE 1	1129	64	76	56	69	90	91	100	39	11	91	101
MCGUIRE 2	1129	76	68	69	87	92	100	101	70	101	102	101
OCONEE 1	846	73	84	88	82	86	100	3	67	102	97	99
OCONEE 2	846	74	80	84	83	94	99	101	101	102	102	88
OCONEE 3	846	74	73	99	76	87	100	101	101	102	102	68
TOTAL	7054	72	78	78	82	88	86	73	82	85	91	96

EQUIVALENT AVAILABILITY FACTOR	MW RATING	APR 1995	MAY 1995	JUN 1995	JUL 1995	AUG 1995	SEP 1995	OCT 1995	NOV 1995	DEC 1995	JAN 1996	FEB 1996	MAR 1996
BELEWS CREEK 1	1120	70	96	97	99	99	8	0	65	94	100	92	93
BELEWS CREEK 2	1120	29	00	32	99	100	100	100	80	68	46	0	0
CLIFFSIDE 5	562	00	00	65	97	99	93	93	96	83	88	99	98
MARSHALL 3	660	85	99	99	99	93	73	73	84	100	99	81	92
MARSHALL 4	660	92	94	99	98	99	99	78	99	57	95	100	97
TOTAL	4122	55	57	76	99	98	70	64	82	80	79	68	69
CATAWBA 1	1129	99	90	100	99	99	99	100	100	100	82	88	100
CATAWBA 2	1129	88	91	99	99	99	99	18	0	94	100	58	100
MCGUIRE 1	1129	100	100	92	84	100	88	92	100	40	12	90	100
MCGUIRE 2	1129	79	100	98	100	99	100	100	100	69	100	100	100
OCONEE 1	846	87	71	99	99	99	99	100	3	67	100	96	98
OCONEE 2	846	91	37	99	99	99	99	100	100	100	100	100	87
OCONEE 3	846	100	99	19	25	96	99	100	100	100	100	100	69
TOTAL	7054	92	86	88	88	99	97	86	72	81	83	89	95

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EXHIBIT NO. 1

DUKE POWER COMPANY
NUCLEAR UNIT OUTAGE REPORT

McGuire 1

NO.	DATE OFF	DATE ON	HOURS/TYPE*	REASON FOR OUTAGE AND CORRECTIVE ACTION
1.	09/27/95	10/02/95	98.16/F	Reactor Coolant Pump tripped due to defective surge protector.
2.	12/14/95	01/25/96	1025.04/S	Refueling Outage - EOC 10 New McGuire record.
3.	02/03/96	02/05/96	37.2/F	Overheated Reactor Coolant Pump Bearing.
4.	02/10/96	02/11/96	20.16/F	Reactor stayed critical while the generator was off-line to repair hydrogen leak.

McGuire 2

1.	12/15/95	12/23/95	188.16/F	Head Vent Valve leak.

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Oconee 1

NO.	DATE OFF	DATE ON	HOURS/TYPE*	REASON FOR OUTAGE AND CORRECTIVE ACTION
1.	11/02/95	12/09/95	916.08/S	Refueling Outage - EOC 16 New Oconee Record.
2.	02/28/96	02/29/96	26.88/F	Electronic Feedwater Module failed.

Oconee 2

None

Oconee 3

1.	03/16/96	03/26/96	231.12/F	Faulty relay sent erroneous signal during testing, turning off feedwater pumps.

Catawba 1

1.	01/05/96	01/09/96	91.2/F	Reactor trip breaker indicated no voltage across contacts.

Catawba 2

1.	10/06/95	11/29/95	1302.96/S	Refueling Outage - EOC 7 Delays due to heat exchanger & valve leaks.
2.	02/06/96	02/18/96	281.04/F	Electrical fault caused loss of off-site power.

* F=Forced S=Scheduled

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DUKE POWER COMPANY
FOSSIL UNIT OUTAGE REPORT
(100 HOURS OR GREATER DURATION)

MONTH	NAME	HRS/TYPE*	REASON FOR OUTAGE AND CORRECTIVE ACTION
Oct 95	Allen 2	116/F	Induced draft fan repairs.
	Allen 3	151/F	Voltage circuit breaker repairs.
	Allen 5	145/F	Control valve leakage repair.
	Belews 1	721/F	Stator windings, bushings & terminals.
	Lee 1	197/S	Boiler inspections.
	Lee 3	104/S	Boiler inspections.
	Marshall 2	384/S	Burner inspection & repair.
	Marshall 4	159/F	Furnace wall tube leak repair.
	Riverbend 7	402/S	Burner inspection & repair.
Nov 95	Belews 1	131/F	Hydrogen cooling system piping & valves.
	Belews 2	147/S	Electrostatic precipitator fouling.
	Marshall 1	472/S	Mechanical precipitator problem.
	Riverbend 7	210/S	Burner inspection & repair.
Dec 95	Allen 4	198/F	Economizer tube leak.
	Cliffside 5	100/F	Induced draft fan controls.
	Marshall 4	280/S	Boiler recirculation pumps.
Jan 96	Allen 4	131/S	Outage Controls Upgrade.
	Allen 5	237/F	Superheat economizer leak repair.
	Belews 2	109/S	Replace and modify boiler tubes.
Feb 96	Allen 1	202/F	Bearing repair.
	Allen 4	696/F	Boiler overhaul.
	Belews 2	696/S	Replace and modify boiler tubes.
	Marshall 3	126/S	Feedwater valve work.
Mar 96	Allen 4	744/S	Boiler overhaul.
	Belews 2	744/S	Replace and modify boiler tubes.
	Lee 2	744/S	Gland seal system.
	Marshall 1	134/S	Electrostatic precipitator problems.

Type* S-scheduled F-forced

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DUKE POWER COMPANY

GENERATION MIX

MONTH	YR	PERCENTAGE		
		FOSSIL	NUCLEAR	HYDRO
OCTOBER	95	31	66	3
NOVEMBER		44	53	3
DECEMBER		42	56	2
JANUARY	96	41	56	3
FEBRUARY		33	63	4
MARCH		30	67	3

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DUKE POWER COMPANY

GENERATION STATISTICS OF MAJOR PLANTS

OCTOBER 1, 1995 - MARCH 31, 1996

PLANT	TYPE FUEL	AVERAGE FUEL COST (¢/kwh)	GENERATION (MWH)
Cliffside 5	Coal	1.58	1,560,100
Belews Creek	Coal	1.51	5,218,100
Marshall	Coal	1.45	6,549,200
McGuire	Nuclear	0.57	8,315,000
Catawba	Nuclear	0.56	7,966,600
Oconee	Nuclear	0.54	10,130,200

DUKE POWER COMPANY

SOUTH CAROLINA RETAIL COMPARISON
OF ESTIMATED TO ACTUAL ENERGY SALES

	1995	1996					
	OCT	NOV	DEC	JAN	FEB	MAR	TOTAL
[1] ESTIMATED SALES [MWH]	1,703,187	1,533,244	1,812,206	1,712,399	1,770,331	1,741,213	10,272,580
[2] ACTUAL SALES [MWH]	1,685,161	1,607,244	1,654,165	1,840,042	1,843,155	1,650,074	10,279,841
[3] AMOUNT DIFFERENCE [1]-[2]	18,026	-74,000	158,041	-127,643	-72,824	91,139	-7,261
[4] PERCENT DIFFERENCE [3]/[2]	1.07%	-4.60%	9.55%	-6.94%	-3.95%	5.52%	-.07%

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DUKE POWER COMPANY

SOUTH CAROLINA RETAIL COMPARISON
OF PROJECTED TO ACTUAL FUEL COSTS
[CENTS PER KWH]

		1995			1996		
		OCT	NOV	DEC	JAN	FEB	MAR
[1]	ORIGINAL PROJECTION	0.9382	1.0546	1.0804	1.0767	0.9104	0.9024
[2]	ACTUAL EXPERIENCE	0.9291	1.1367	1.1484	1.0782	0.8647	0.9053
[3]	AMOUNT IN BASE	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
[4]	VARIANCE FROM ACTUAL [1-2]/[2]	.98%	-7.22%	-5.92%	-.14%	5.29%	-.32%

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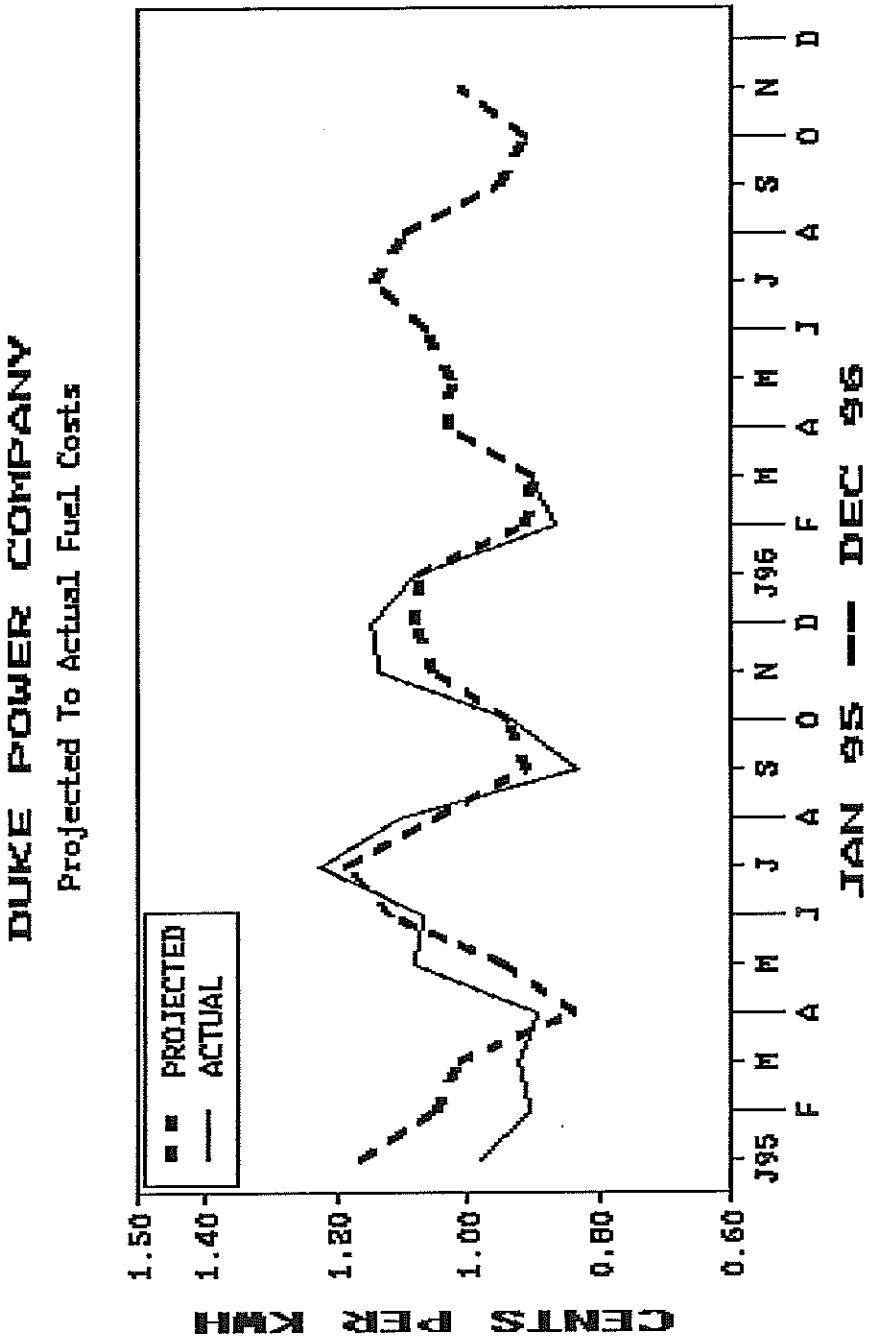

Duke Power Company

ADJUSTMENT FOR FUEL COSTS

APPLICABILITY

This adjustment is applicable to and is a part of the Utility's South Carolina retail electric rate schedules.

The Public Service Commission has determined that the costs of Fuel in an amount to the nearest one ten-thousandth of a cent, as determined by the following formula, will be included in the base rates to the extent determined reasonable and proper by the Commission for the succeeding six months or shorter period:

$$F = \frac{E}{S} + \frac{G}{S_1}$$

Where:

F = Fuel cost per kilowatt-hour included in base rate, rounded to the nearest one ten-thousandth of a cent.

E = Total Projected system Fuel costs:

(A) Fuel consumed in the Utility's own plants and the Utility's share of fuel consumed in jointly owned or leased plants. The cost of fossil fuel shall include no items other than those listed in Account 151 of the Commission's Uniform System of Accounts for Public Utilities and Licensees. The cost of nuclear fuel shall be that as shown in Account 518 excluding rental payments on leased nuclear fuel and except that, if Account 518 also contains any expense for fossil fuel which has already been included in the cost of fossil fuel, it shall be deducted from this account.

Plus

(B) Purchased power fuel costs such as those incurred in unit power and Limited Term power purchases where the fuel costs associated with energy purchased are identifiable and are identified in the billing statement.

Plus

(C) Interchange power fuel costs such as Short Term, Economy and other where the energy is purchased on economic dispatch basis.

Energy receipts that do not involve money payments such as Diversity energy and payback of storage energy are not defined as purchased or interchange power relative to this fuel calculation.

Minus

(D) The cost of fuel recovered through intersystem sales including the fuel costs related to economy energy sales and other energy sold on an economic dispatch basis.

Energy deliveries that do not involve billing transactions such as Diversity energy and payback of storage are not defined as sales relative to this fuel calculation.

S = Projected system kilowatt-hour sales excluding any intersystem sales.

G = Cumulative difference between jurisdictional fuel revenues billed and fuel expenses at the end of the month preceding the projected period utilized in E and S.

S_1 = Projected jurisdictional kilowatt-hour sales for the period covered by the fuel costs included in E.

The appropriate revenue-related tax factor is to be included in these calculations.

The fuel cost F as determined by SCPSC Order No. 95-1707 for the period December 1995 through May 1996 is 1.000 cent per kilowatt-hour.

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DUKE POWER COMPANY
HISTORY OF CUMULATIVE RECOVERY ACCOUNT

PERIOD ENDING	OVER (UNDER)$
MAY 1979 - Automatic Fuel Adjustment in Effect	
November 1979	1,398,442
May 1980	11,322,948
November 1980	4,588,331
May 1981	(5,760,983)
November 1981	(13,061,000)
May 1982	(14,533,577)
November 1982	(4,314,612)
May 1983	20,915,390
November 1983	14,192,297
May 1984	18,245,503
November 1984	14,478,363
May 1985	2,551,115
November 1985	(553,465)
May 1986	(1,318,767)
November 1986	(29,609,992)
May 1987	(27,241,846)
November 1987	(29,329,168)
May 1988	(9,373,768)
November 1988	6,544,914
May 1989	6,067,739
November 1989	11,372,399
May 1990	15,421,968
November 1990	2,939,303
May 1991	17,068,483
November 1991	21,265,000
May 1992	21,080,856
November 1992	11,553,801
May 1993	16,959,555
November 1993	221,606
May 1994	6,609,897
November 1994	1,037,659
May 1995	5,088,619
November 1995	(377,507)

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DUKE POWER COMPANY

SOUTH CAROLINA RETAIL
PROJECTIONS OF THE CUMULATIVE RECOVERY ACCOUNT
FOR THE SIX MONTH PERIOD ENDING
NOVEMBER 1996

	FUEL BASE	PROJECTED CUMULATIVE OVER\(UNDER) RECOVERY [$]
	.8000	(26,602,026)
	.8250	(23,882,166)
	.8500	(21,162,306)
	.8750	(18,442,446)
	.9000	(15,722,585)
	.9250	(13,002,725)
	.9500	(10,282,865)
	.9750	(7,563,005)
CURRENT FACTOR >>	1.0000	(4,843,145)
COMPANY PROPOSED >>	1.0000	(4,843,145)
	1.0250	(2,123,284)
ZERO UNDER >>	1.0445	(1,793)
ZERO OVER >>	1.0446	9,086
	1.0500	596,576
	1.0750	3,316,436
	1.1000	6,036,296
	1.1250	8,756,157
	1.1500	11,476,017
	1.1750	14,195,877
	1.2000	16,915,737